ABSTRACT

A common address space, which may be used for multiple purposes, is divided in two or more segments. The address space contains a list of device addresses for a group of entities, which may include devices, that share a common communication channel, such as a network. Each segment can correspond a special feature or function that corresponds to the entities whose address are stored in that segment. The address space is randomized by scrambling each address listed in the address space by an M-bit pseudo-random scrambling mask to offset each address individually. The pseudo-random scrambling mask is created when the network is established and is distributed among the network devices. When processing a received address, a device may use the same pseudo-random scrambling mask to descramble the address (depending on the scrambling function). After descrambling, any special features of the address are known and can be exploited.